

Fig. 7 is a cross-sectional view of a horizontal micro-optics concentrator used in conjunction with a vertical micro-optics concentrator to more efficiently capture the sun's energy and direct it to a receiver.

Fig. 8 is a cross-sectional view of a micro-optics concentrator wherein layers of removable plastic film cover and protect it.

Fig. 9 is a cross-sectional view of a solar receiver, such as a photovoltaic module, showing cooling fins to enhance convective cooling.

Fig. 10a is a top view of a solar receiver showing placement of thermal radiation detectors over its surface.

Fig. 10 b is a schematic of a bridge circuit to detect mis-steering of the concentrated solar beam.

Fig. 11a is a cross-sectional view of apparatus for the training of an ensemble of rotatable mirrored elements in a micro-optics concentrator.

Fig. 11b is a block diagram summarizing the training steps of Heating, Vibration, and CW and CCW Rotation.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

FIG. 1 is a cross-sectional view of an ensemble of rotatable elements 1, each with a micro-mirror surface 2 to reflect the incident sunlight 3 as focussed concentrated light 30 to a receiver 16. The aggregate of the elements 1, together with their containment sheets 11, fluid 70, and addressing system are herein referred to as a micro-optics concentrator 4. The inventor of this instant invention is the co-inventor of U. S. Patent #6,612,705, in which the micro-optics concentrator 4 is described in detail. The combination of the micro-optics concentrator 4 and receiver 16 forms a unique solar collection system. The orientation of the mirrored rotatable elements 1 can be achieved by electric fields, magnetic fields, electromagnetically, electrophoretically, magnetophoretically, etc. Since there is great advantage both from the response to the applied torque, and to the reduction in materials costs by